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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,464	09/13/2000	Koichi Tamura	016778/0417	7564
22428	7590	04/30/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			PHAN, MAN U	
			ART UNIT	PAPER NUMBER
			2665	
			DATE MAILED: 04/30/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,464

Applicant(s)

TAMURA, KOICHI

Examiner

Man Phan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,9 and 11 is/are rejected.
- 7) ☒ Claim(s) 2,3,6,8,10 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3, 4, 5, 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The application of Tamura for a "Cell search method in CDMA capable of carrying out a cell search processing at a high speed" filed 09/13/2000 has been examined. Responsive to the restriction requirement filed on 03/17/2004, affirmation of the election has been made by applicant, and a provisional election was made without traverse to prosecute the invention of group I, claims 1-12. Claims 13-18 are withdrawn from further consideration by the Examiner, 37 C.F.R. ' 1.142(b), as being drawn to a non-elected invention. Claims 1-12 are pending in the application.

Priority

2. This application claims priority to Japan Application No. 11-260461 which was filed September 14, 1999. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC ' 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be

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patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leem (US#6,452,912) in view of Suzuki et al. (US#6,507,576).

With respect to claims 1, 4, both Leem and Suzuki disclose a novel method and system for implementing a cell search processing for CDMA at a high speed, and reducing power dissipation, according to the essential features of the claims. Leem (US#6,452,912) provides a method and system for rapidly searching a cell using a PN code in a mobile station utilizing received power levels of adjacent cells, which are measured to perform a handover. Upon detection of a power-off request, the mobile station stores in a memory PN information of adjacent cells in association with receiving power levels of the adjacent cells. Upon power on, it is determined whether the mobile station is presently located in a same cell group where it was located at a power-off time. When the mobile station is located in the same cell group, it sequentially reads the PN information from the memory in order of receiving power level to search the adjacent cells. Further, the mobile station searches a cell registered at the power-off time prior to searching the adjacent cells (See Fig. 4 and Col. 3, lines 4 plus). Similarly, Suzuki et al. (US#6,507,576) also discloses a cell search method using a long code masked symbol (search code) in perch channels. The spreading factor of the long code masked symbol (search code) is set to a value lower than spreading factors of other ordinary symbols. As

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a result, it becomes possible to reduce the circuit scale and power dissipation of the mobile terminal and raise the speed of cell search in a mobile communication system using CDMA (Fig. 8; Col. 4, lines 44 plus and Col. 2, lines 61 plus).

One skilled in the art would have recognized the need for effectively and efficiently cell search processing in CDMA communication, and would have applied Suzuki's teaching of the search code in perch channels into Leem's novel use of the rapid cell search method for a mobile station in a mobile communication system. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Suzuki's CDMA mobile communication system into Leem's method for searching cells in mobile communication system with the motivation being to provide a method and system for a cell search processing at a high speed.

5. Claims 5, 7, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leem (US#6,452,912) in view of Suzuki et al. (US#6,507,576) as applied to the claims above, and further in view of Sato (US#6,233,454).

With respect to claims 5, 7, 9 and 11, Leem and Suzuki disclose the claimed limitations discussed in paragraph 4 above. However, these claims differ from the claims above in that the claims require whether or not the timer value is not less than a communication stop time interval threshold value for carrying out a cell search. In the same field of endeavor, Sato (US#6,233,454) discloses in Figs 2, 4 block diagrams illustrated an arrangement of a mobile station in cell search processing, in which a peripheral cell search controller 15 for executing a peripheral cell search at a pre-set timer

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period, the controller 15 being provided with timers T1 and T2, a message generator 16 for generating a message for reporting to the network the result of the peripheral cell search periodically executed by the peripheral cell search controller 15, and a received signal level measuring unit 17 for measuring a received signal strength indicator or indication (carrier RSSI, or simply RSSI) of a receiving band signal sent from the radio signal transceiver 11 (Col. 4, lines 40 plus). Furthermore, Figs 3 & 5 are the flow charts illustrated the operation of searching a peripheral cell in the mobile station according to the invention, in which the peripheral cell search controller 15 operates to set a cell search execution period .DELTA.t1 to the timer T1 (step 2), and the peripheral cell search controller 15 operates to set a received signal level measurement execution period .DELTA.t2 to the timer T2 (step 3) (Col. 5, lines 6 plus).

One skilled in the art would have recognized the need for effectively and efficiently cell search processing in CDMA communication, and would have applied Sato's peripheral cell search controller utilizing timers for executing the time interval value, and Suzuki's teaching of the search code in perch channels into Leem's novel use of the rapid cell search method for a mobile station in a mobile communication system. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Sato's mobile station Suzuki's CDMA mobile communication system into Leem's method for searching cells in mobile communication system with the motivation being to provide a method and system for a cell search processing at a high speed.

Allowable Subject Matter

6. Claims 7, 9 and 19, 21 are objected to as being dependent upon the rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

7. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest the steps measuring by a timer, an elapsed time interval between an end of communication and a start of re-communication; estimating a moving speed of a mobile station; estimating a moving distance on the basis of the estimated moving speed and the elapsed time interval, as specifically recited in claims 2, 3. The closest prior art of record fails to disclose or suggest the steps of carrying out a normal cell search processing when the timer value is not less than the communication stop time interval threshold value, as specifically recited in claims 6, 8, 10, 12.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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The Ishikawa et al. (US#6,697,622) is cited to show control method of searching neighboring cells, mobile station, and mobile communication system.

The Sato (US#6,633,556) is cited to show the mobile communication system and mobile communications method.

The Elzein (US#6,259,917) is cited to show the apparatus and method for deriving a current network location from previously visited networks and movements between the previously visited networks.

The Dahlman et al. (US#6,526,039) is cited to show the method and system for facilitating timing of base stations in an asynchronous CDMA mobile communications system.

The Maru (US#6,385,180) is cited to show the radio transmission apparatus.

The O'Malley et al. (US#5,604,925) is cited to show the high speed cell search system for CDMA.

The Nystrom et al. (US#6,185,244) is cited to show the cell searching in CDMA communication system.

The Kim et al. (US#6,571,099) is cited to show the cell searching method in asynchronous wideband CDMA system.

The Kransmo (US#6,597,911) is cited to show the system method and apparatus for cell searching in a next generation overlay of a preexisting network.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (703)305-1029.

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The examiner can normally be reached on Mon - Fri from 6:30 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 305-9051, (for formal communications intended for entry)

Or: (703) 305-3988 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Mphan

04/28/2004.


MAN PHAN
PATENT EXAMINER